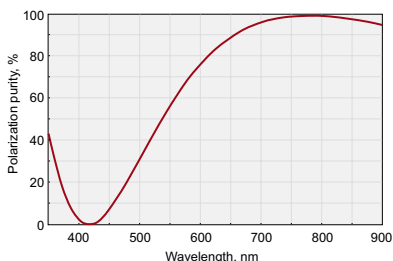
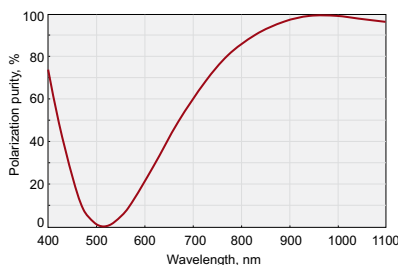


## ZERO ORDER DUAL WAVELENGTH WAVEPLATES

When optical axis is turned by 45 degrees to input polarization, the waveplate rotates polarization of Ti:Sapphire laser fundamental (800 nm) by 90 degrees and the polarization of Ti:Sapphire second harmonic (400 nm) remains the same.



Polarization purity of zero order dual waveplate.  
 $\lambda/2@800\text{ nm} + \lambda/400\text{ nm}$



Polarization purity of zero order dual waveplate.  
 $\lambda/2@1030\text{ nm} + \lambda/515\text{ nm}$

### SPECIFICATIONS

Material	Single crystal quartz
Optical axis	normal to facet on circumference of retarder
Clear aperture	Ø17 mm
Ring mount outer diameter	25.4 +0.0/-0.12 mm
Surface quality	20-10 scratch & dig (MIL-PRF-13830B)
Wavefront distortion	$\lambda/10 @ 633\text{ nm}$
Parallelism	<10 arcsec
AR coating	R<0.5%

Code	Description	AR coated	Laser Damage Threshold	Application	Price, EUR
465-4211	optically contacted $\lambda/2@800\text{ nm} + \lambda@400\text{ nm}$	800+400 nm	>10 mJ/cm <sup>2</sup> , 50 fsec pulse, 800 nm typical	Ti: Sapphire	345
466-4211	air-spaced $\lambda/2@800\text{ nm} + \lambda@400\text{ nm}$	800+400 nm	100 mJ/cm <sup>2</sup> , 50 fsec pulse, 800 nm typical	Ti: Sapphire	410
465-4212	optically contacted $\lambda/2@1030\text{ nm} + \lambda@515\text{ nm}$	1030+515 nm	>10 mJ/cm <sup>2</sup> , 50 fsec pulse, 1030 nm typical	Yb: KGW/KYW	345
466-4212	air-spaced $\lambda/2@1030\text{ nm} + \lambda@515\text{ nm}$	1030+515 nm	100 mJ/cm <sup>2</sup> , 50 fsec pulse, 1030 nm typical	Yb: KGW/KYW	410

### HOUSING ACCESSORIES

Polarizer Holder  
840-0180

See page 8.86



## LOW ORDER WAVEPLATES

- Thickness 0.15–0.35 mm
- Thinner than multiple order

Low order plates are less temperature sensitive and temperature dependent than multiple order plates. These plates are suitable for high and low power applications.

### SPECIFICATIONS

Material	Single crystal quartz
Optical axis	normal to facet on circumference of retarder
Clear aperture	Ø17 mm
Ring mount outer diameter	25.4 +0.0/-0.12 mm
Surface quality	20-10 scratch & dig (MIL-PRF-13830B)
Wavefront distortion	$\lambda/10 @ 633\text{ nm}$
Parallelism	< 10 arcsec
AR coating	R < 0.5%
Laser damage threshold	100 mJ/cm <sup>2</sup> , 50 fsec pulse, 800 nm typical

### RELATED PRODUCTS

Low Order Plates  
of other wavelengths

See page 1.54

High Precision Rotation  
Polarizer, Waveplate  
Mount 840-0186

See page 8.88



Center wavelength, nm	AR coating range, nm	Retardation $\lambda/2$		Retardation $\lambda/4$	
		Catalogue no.	Price, EUR	Catalogue no.	Price, EUR
1030	1000-1060	461-4208	160	461-4408	160
800	760-840	461-4215	160	461-4415	160
780	740-820	461-4220	160	461-4420	160
515	500-530	461-4232	160	461-4432	160
400	380-420	461-4235	160	461-4435	160
343	333-353	461-4241	192	461-4441	192
266	257-275	461-4245	196	461-4445	196
257	250-265	461-4246	196	461-4446	196